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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,947	10/25/2001	Robert C. Moore	SD6858	8459
7590 06/15/2004				
Timothy D. Stanley Sandia National Laboratories P.O. Box 5800 - MS-0161 Albuquerque, NM 87185-0161				
EXAMINER				
CINTINS, IVARS C				
ART UNIT		PAPER NUMBER		
1724				

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,947

Applicant(s)

MOORE ET AL.

Examiner

Ivars C. Cintins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-30, 32-43 and 46-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 39-43, 46-49 and 56-65 is/are allowed.
- 6) ☒ Claim(s) 2-23, 26, 30, 32, 34-38 and 50-55 is/are rejected.
- 7) ☒ Claim(s) 24, 25, 27-29 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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The Office action dated January 8, 2004 is hereby withdrawn, in order to consider the preliminary amendment sent December 18, 2001, a copy of which Applicant has submitted on March 26, 2004.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 14, 16, 21, 32, 34, 38, 51, 52, 54 and 55 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the Galbacs et al. publication entitled “Removal of the Arsenic Content of Drinking Water” (document AG in the IDS filed December 26, 2001). See the Summary; paragraphs 1 and 2 of the Discussion; and the Conclusion in this document. Also, it is requested that Applicant furnish the publication date of this cited document. Until Applicant alleges and demonstrates otherwise, this document is presumed to be prior art.

Claims 21, 22, 32, 34, 35, 38, 52, 54 and 55 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the Galbacs et al. publication entitled “Ammonia Removal From Sewage Waters By Magnesium Salts” (document AJ in the IDS filed December 26, 2001). See lines 2-4 of the Abstract; and paragraph 12 of the Experimental section of this document.

Claims 21, 23, 26, 30, 32 and 34-38 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schuster et al. (U.S. Patent No. 5,114,592). See col. 4, lines 40-42; and col. 7, lines 66-67.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 7-11, 15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Galbacs et al. publication entitled "Removal of the Arsenic Content of Drinking Water."

The reference discloses the claimed invention with the exception of the purity of the treated water (claims 4 and 5), the particle size (claims 9 and 10) and surface area (claim 11) of the magnesium hydroxide, the amount of time that the magnesium hydroxide is in contact with the water (claim 15), and the amount of magnesium hydroxide employed per liter of water (claims 17-20). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to purify the water to the values recited in claims 4 and 5, in order to ensure that this water is safe to drink. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a magnesium hydroxide having the characteristics recited in claims 9-11, in an amount recited in claims 17-20, for the duration of time recited in claim 15, in order to ensure that the water undergoing treatment is adequately purified.

Claims 2-20, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Galbacs et al. publication entitled "Ammonia Removal From Sewage Waters By Magnesium Salts." The reference discloses the claimed invention with the exception of the purity of the treated water (claims 4 and 5), the particle size (claims 9 and 10) and surface area (claim 11) of the magnesium hydroxide, the use of an injector (claim 12), the amount of time that the magnesium hydroxide is in contact with the water (claims 13-15), and the amount of magnesium hydroxide employed per liter of water (claims 17-20). However, it would have been obvious to

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one of ordinary skill in the art at the time the invention was made to purify the water to the values recited in claims 4 and 5, in order to ensure that this water is safe to drink. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a magnesium hydroxide having the characteristics recited in claims 9-11, in an amount recited in claims 17-20, for the duration of time recited in claims 13-15, in order to ensure that the water undergoing treatment is adequately purified. Furthermore, since the reference clearly requires the addition of magnesium salts, which salts must be added in either solid or slurry form, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a conventional powder or suspension injector to perform this function.

Claims 6, 8, 9-16, 18, 20 and 50-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. The reference discloses the claimed invention with the exception of the particle size (claims 9 and 10) and surface area (claim 11) of the magnesium hydroxide, the amount of time that the magnesium hydroxide is in contact with the water (claims 13-15), the amount of magnesium hydroxide employed per liter of water (claims 18 and 20), and the use of magnesium oxide (claims 50-55). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a magnesium hydroxide having the characteristics recited in claims 9-11, in an amount recited in claims 18 and 20, for the duration of time recited in claims 13-15, in order to ensure that the water undergoing treatment is adequately purified. Also, since magnesium oxide is known to form magnesium hydroxide when placed in an aqueous solution, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ this compound as the source of magnesium hydroxide in the reference system (see col. 7, line 67).


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Claims 39-43, 46-49 and 56-65 are allowed. Claims 24, 25, 27-29 and 33 are objected to as being dependent upon a rejected base claim, but would also be allowed if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Blaine Copenheaver, can be reached at (571) 272-1156.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ivars C. Cintins
Primary Examiner
Art Unit 1724

I. Cintins
June 11, 2004